

**Document IWG-7/11R5**  
**June 23, 1999**

**United States of America**  
**[DRAFT] PROPOSALS FOR THE WORK OF THE CONFERENCE**  
**Proposals for Agenda Item 1.5**

to consider regulatory provisions and possible additional frequency allocations for services using high altitude platform stations, taking into account the results of ITU-R studies conducted in response to Resolution **122 (WRC-97)**;

**Background**

Resolution **122 (WRC-97)**, “Use of the bands 47.2 – 47.5 GHz and 47.9 – 48.2 GHz by high altitude platform stations in the fixed service and by other services”, instructs the Director of the Radiocommunication Bureau, that from 22 November 1997, to accept notices in the 47.2 – 47.5 and 49.2 – 48.2 GHz only for high altitude platform stations in the fixed service and for feeder links for the broadcasting-satellite services pending review of sharing studies between co-primary services in the band. On the basis of studies conducted in the ITU-R, it is appropriate to modify Resolution 122 (WRC-97). A draft new Recommendation [4-9S/AAX] has been developed that establishes the performance parameters for FSS antennas that can share with the HAPS system.

On the basis of these conclusions, the following proposal is made:

**USA/1.5/XX      MOD Resolution 122 (WRC-97)****RESOLUTION 122 (WRC-97)****Use of the bands 47.2-47.5 GHz and 47.9-48.2 GHz by high altitude platform stations in the fixed service and by other services**

The World Radiocommunication Conference (~~Geneva, 1997~~Istanbul, 2000),

*considering*

- a) that the band 47.2-50.2 GHz is allocated to the fixed, mobile and fixed-satellite services on a co-primary basis;
- b) that ~~this Conference has~~WRC-97 made provision for operation of high altitude platform stations, also known as stratospheric repeaters, within the fixed service in the bands 47.2-47.5 GHz and 47.9-48.2 GHz;
- c) that ITU has among its purposes “to promote the extension of the benefit of the new telecommunication technologies to all the world’s inhabitants” (No. 6 of the Constitution of the ITU (Geneva, 1992));
- d) that systems based on new technologies using high altitude platforms in the bands 47.2-47.5 and 47.9-48.2 GHz will be able to provide high-capacity, competitive services to urban and rural areas;
- e) that high altitude platform systems are in an advanced stage of development and some countries have notified such systems to ITU;
- f) that WRC-97 adopted a new definition of high altitude platform stations in Article S1, modified No. S11.24 and added No. S11.26 in the Radio Regulations providing for notices relating to assignments for high altitude platform stations in the bands 47.2-47.5 GHz and 47.9-48.2 GHz~~Board issued a provisional rule of procedure concerning notification periods in No. S11.24/1228 in February 1997;~~
- g) that ~~in spite of the urgency attached to the development of such systems, technical, sharing and regulatory issues should be studied in order to achieve the most efficient use of the spectrum available for these systems~~ since WRC-97 the ITU-R has concluded confirmed that sharing is feasible between high altitude platform stations and the FSS;
- h) that technical studies are still required in order to ascertain the extent to which sharing of the bands 47.2-47.5 GHz and 47.9-48.2 GHz is feasible between systems using high altitude platforms in the fixed service and systems in the fixed, ~~fixed-satellite~~ and mobile services, and to ascertain the requirements to protect radio astronomy services in adjacent bands from spurious emissions;

i) that the radio astronomy service has primary allocations in the bands 42.5-43.5 GHz and 48.94-49.04 GHz;

~~j) that ITU-R studies are already under way on the preferred characteristics of systems using high altitude platforms and the feasibility of sharing between these systems and systems of other services and between these systems and other systems in the fixed service (Questions ITU-R 212/9, ITU-R 218/9 and ITU-R 251/4);~~

~~k) that No. **S5.552** urges administrations to reserve fixed satellite service use of the band 47.2-49.2 GHz for feeder links for the broadcasting satellite service, and that preliminary ITU-R studies indicate that high altitude platform stations in the fixed service may share with broadcasting satellite feeder links;~~

~~l) that the development of services using high altitude platform stations in these bands requires major investment and that manufacturers and operators should be given the confidence to make the necessary investment in these applications;~~

*resolves*

1 to urge administrations to facilitate coordination between high altitude platform stations in the fixed service operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz and other co-primary services in their territory and adjacent territories;

2 that, on a provisional basis, the procedures of Article **S9** shall be used for coordination between satellite systems and high altitude platform systems;

3 to request ITU-R to carry out urgently studies on the appropriate technical sharing criteria for the situations referred to in *considering h)*, with priority given to the sharing with other systems in the fixed ~~and fixed satellite services, in particular the determination of the appropriate geographical separation from feeder links in the broadcasting satellite service;~~

4 that WRC-~~9903~~ should review the results of these studies and consider refinement of the regulatory provisions ~~for that might facilitate a broader application of these~~ high altitude platform technologies,

*instructs the Director of the Radiocommunication Bureau*

1 that notices concerning high altitude platform stations that were received by the Bureau prior to 22 November 1997, and provisionally recorded in the Master International Frequency Register in accordance with the provisional rule of procedure issued by the Board, shall be maintained;

2 that ~~from 22 November 1997, and~~ pending review of the sharing studies in *considering h)* ~~and review of the notification process by WRC-99,~~ the Bureau shall accept notices in the bands 47.2-47.5 GHz and 47.9-48.2 GHz only for high altitude platform stations in the fixed service and for the fixed-satellite service, including feeder links for the broadcasting-satellite service, ~~shall continue to process notices for fixed-satellite service networks (except for feeder links for the broadcasting-satellite service) for which complete information for advance publication has been received prior to 27 October 1997, and shall inform the notifying administrations accordingly.~~

*EDITORIAL NOTE: A majority of the participants in IWG-7 concur in this document. However, one member, representing Sky Station International, has expressed a preference (1) to maintain and expand considering (j); (2) that the only modification to the resolves should be to postpone the reviewing conference from WRC-2000 to WRC-2003; and (3) to extend for a minimum of three more years (i.e., until the next conference) the freeze on FSS notices that is contained in “instructs the Director of the Radiocommunication Bureau” No. 2. The proposed expanded considering (j) would read as follows:*

j) that ITU-R studies are already under way on the preferred characteristics of systems using high altitude platforms and the feasibility of sharing between these systems and systems of other services and between these systems and other systems in the fixed service (Questions ITU-R 212/9, ITU-R 218/9 and ITU-R 251/4) and that although Draft New Recommendations [4-9S/AAX] and [9B/HAPS1] and [9B/HAPS2] have been developed, further studies are required to fully assess the implications of these scenarios and to consider the effect of mitigation techniques on increasing shared use of these bands by HAPS and other systems;